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FLOODPLAIN MANAGEMENT RECONNAISSANCE STUDY REPORT

NEW HAVEN
GALLATIN COUNTY

24500 VILLAGE OF NEW HAVEN,

GALLATIN COUNTY, ILLINOIS

FLOODPLAIN MANAGEMENT

RECONNAISSANCE STUDY

Prepared by

US DEPARTMENT OF AGRICULTURE,

SOIL CONSERVATION SERVICE

Champaign, Illinois

In cooperation with

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF WATER RESOURCES

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VILLAGE OF NEW HAVEN

RECONNAISSANCE STUDY

INTRODUCTION

Use of floodprone areas can be a severe problem in Illinois. Urbanization and floodplain encroachment are increasing the severity of this problem. Over 800 communities in Illinois have been identified as having flood problems.

The Illinois Division of Water Resources (DWR) is the responsible state agency for urban flood control and for setting priorities of flood studies within urban areas. The Soil Conservation Service is providing assistance to the Division of Water Resources in setting these priorities. A joint coordination agreement was executed between the Division of Water Resources, State of Illinois, and the USDA, Soil Conservation Service on April 30, 1976 and revised in December 1978 to furnish technical assistance in carrying out Flood Hazard Studies. These studies are carried out in accordance with Federal Level Recommendation 3 of "A Unified National Program for Floodplain Management", and under Section 6 of Public Law 83-566. A plan of study was executed in October 1985 for reconnaissance studies for 10 Illinois communities. These reconnaissance studies will utilize existing floodplain information, historical high water profiles, and the 100 year floodplain from flood insurance studies when available. Average annual damages are estimated for the structures within the floodplain.

The study was conducted and the report provided to: 1) evaluate needs for additional future studies, 2) estimate average annual damages, 3) provide an updated estimate of the 100 year floodplain map, and 4) provide guidance and recommendations to the community for improved floodplain management.

STUDY AREA DESCRIPTION

The Village of New Haven is located in northeast Gallatin County, Illinois, on the south bank of the Little Wabash River about 30 miles north and east of Harrisburg, Illinois. The population of New Haven is 559, according to the 1980 census.

The primary transportation facility in the area is Illinois State Highway #141. A blacktop road and gravel road network connects the rural areas to the Village of New Haven. The Little Wabash River is used by personal fishing boats, canoes, pleasure craft boats, and some commercial fishing. There is a boat ramp and parking area located on the Little Wabash River in New Haven.

The Little Wabash River is the north boundary of the Village of New Haven and flows into the Wabash River approximately 1.5 miles southeast of New Haven. The approximate drainage area of the Little Wabash River is 3,200 square miles and is in the Ohio River Basin, hydrologic unit #05120114, subwatershed #100. The Wabash River has a drainage area of approximately 29,625 square miles at its confluence with the Little Wabash River.

New Haven is situated on the higher south bank of the Little Wabash River. The opposite side of the river has wide floodplains and low slough areas. The village is predominantly on moderately sloping terrain near the river that becomes a steeply sloped wooded area and changes to a flatter upland area as you proceed away from the river. The local drainage area to the village is less than 240 acres. The steepness of the slopes and type of soils leaves most of the areas that are not urbanized in woodland and grassed areas with very little in cropland. The small bottomland area on the east side of the village that is in cropland has corn and soybeans as the main crop. Conventional tillage is still the primary method of farming. Some of the upland and bottomland areas in grassland are used as pastures.

The average annual rainfall is 45 inches that is uniformly distributed throughout the year. Rainfall in the summer comes mostly as showers or thunderstorms that are of brief duration. Annual snowfall is about 15 inches per year.

The soils in New Haven are Uniontown silt loam and Reesville silt loam in the moderately sloped area and Alford silt loam in the moderate to steeply sloped areas. They are moderately to well drained soils with the exception of Reesville which is somewhat poorly drained. Uniontown and Reesville silt loam formed in silty material over sediments of the Wisconsin glacial age while Alford silt loam formed in silty windblown material, or loess, generally in the uplands. These soils are not well suited for urban uses, roads, or sanitary facilities because of their high moisture holding capacity, slopes, moderate permeability, and seasonal high water table. Because of the slopes and the hazard of erosion, these soils need good management if cultivated.

The village's water supply is from wells. The sanitary facilities are septic systems, but the village is in the process of hooking up all septic systems to a central treatment facility that will be completed in 1987. The floodwater and stormwater is handled by surface drainage systems. In the case of high stages on the Wabash and Little Wabash Rivers, stormwater drains off with the lowering of the stage on these rivers.

NATURAL VALUES

The corporate limits of New Haven is approximately 40% in timberland which is ideal for wildlife. A large part of this timberland is dense and bushy undergrowth with a portion on steep slopes. The timberland is split between upland areas and low floodplain areas and most of it is not too far from water. Even what little cropland and pastureland there is has some sporadic

wet areas and drainageways that are left in a natural state of trees or grasslands. This provides many opportunities of cover for small game to live and travel the area. The boat ramp and parking area provided at New Haven to the Little Wabash River affords ample opportunity to boating and fishing in the Little Wabash River and the Wabash River 1.5 miles downstream.

FLOOD PROBLEMS

Flooding at New Haven is primarily from the Little Wabash River which is affected by backwater of the Wabash River. No significant building damages occur until approximately the 50 year frequency elevation.

The boat ramp, parking area, and recreation area will have some cleanup from almost any storm such as silt deposition on the boat ramp and flooding of low lying areas. There is some flooding of agricultural land on the eastern side of the corporate limits that amounts to approximately 27 acres at the 100 year frequency elevation.

All of the village is on septic systems. There are overflow pipes to the surface runoff system and some of the surface ditches are contaminated. No attempt was made to quantify any damages because the village is building a treatment facility and all the septic systems are going to be connected to it when it is completed in 1987. The local drainage system is a surface runoff system utilizing small open ditches and the streets. There is some damage to streets on an annual basis due to wet conditions or water related problems. There has been some improvement to the outlets of these surface drains where they enter the river. There is some erosion in these surface drains at their outlets but it did not appear to be causing any major problem at the present time. The water supply is from wells east of town along the river. Access to the wells during flooding is by boat only, but there was no indication by the local people that flooding causes any damage to the wells.

According to local people the record flood was in 1937. That flood approached the 100 year frequency elevations. A floodplain information booklet prepared in November 1983 by the US Army Corps of Engineers for the State of Illinois stated that the backwater from the Wabash River

affects flood stage elevations at New Haven. Illinois Route #141 is built approximately 10 feet higher than flood stages at New Haven. This and the lack of any major flooding since 1937 leads the local residents to believe that the Little Wabash River will not cause them any serious flood problems and that the flood elevations for their community are too high.

The village noted that storms locally did not cause flooding serious enough to damage any buildings. In 1961, back to back 6 inch rainfall storms in two days caused no local flood problems or damages of any significance according to local residents. This is, no doubt, because of the small drainage area and the natural terrain has sufficient slope to the river with no apparent ponding areas.

PROBLEM SUMMARY

Estimated average annual damages to the Village of New Haven are listed below:

Type	Number	Total Value	Av. Annual Damages
Homes, trailers, or trailer a/c units	65	$1,240,000	$ 6,470
Garages/sheds	67	176,000	1,130
Businesses	12	360,000	780
Subtotal	144	$2,776,000	8,380
Agricultural Flooding (approximately 27 acres)			700
Recreational Area Flooding & Cleanup			170
Street Repair			2,000
Total estimated average annual damages for New Haven =			$ 11,250

Flooding is an annual occurrence to the boat ramp and low lying areas. Significant building damages do not occur until the 50 year frequency storm with the exception of a few sheds along the river.

EXISTING FLOODPLAIN MANAGEMENT

The Village of New Haven has participated in the emergency phase of the National Flood Insurance Program since October, 1975. The floodplain was delineated by the US Army Corps of Engineers for the State of Illinois in November 1983. The village needs to adopt the proper zoning or ordinances regarding building in the floodplain by August to participate in the regular program. The map in this report is the same as the 1983 Corps of Engineers map.

RECOMMENDATIONS

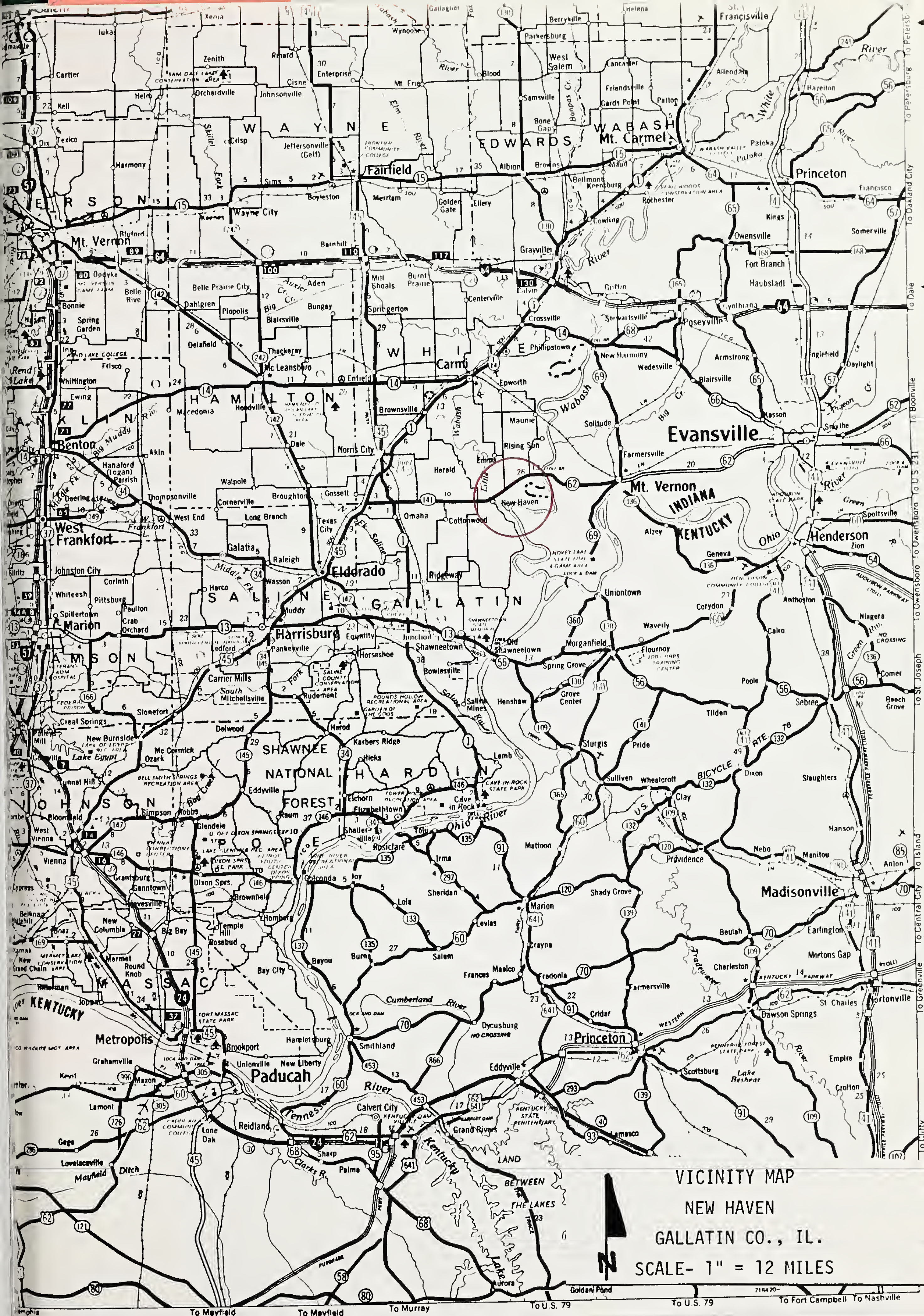
It is recommended that the Village of New Haven develop zoning and ordinances regarding building in the floodplain. They should also participate in the National Flood Insurance Program.

The village should follow up to be sure that all the septic systems are hooked up to the new treatment facility and that the whole system is protected from flooding.

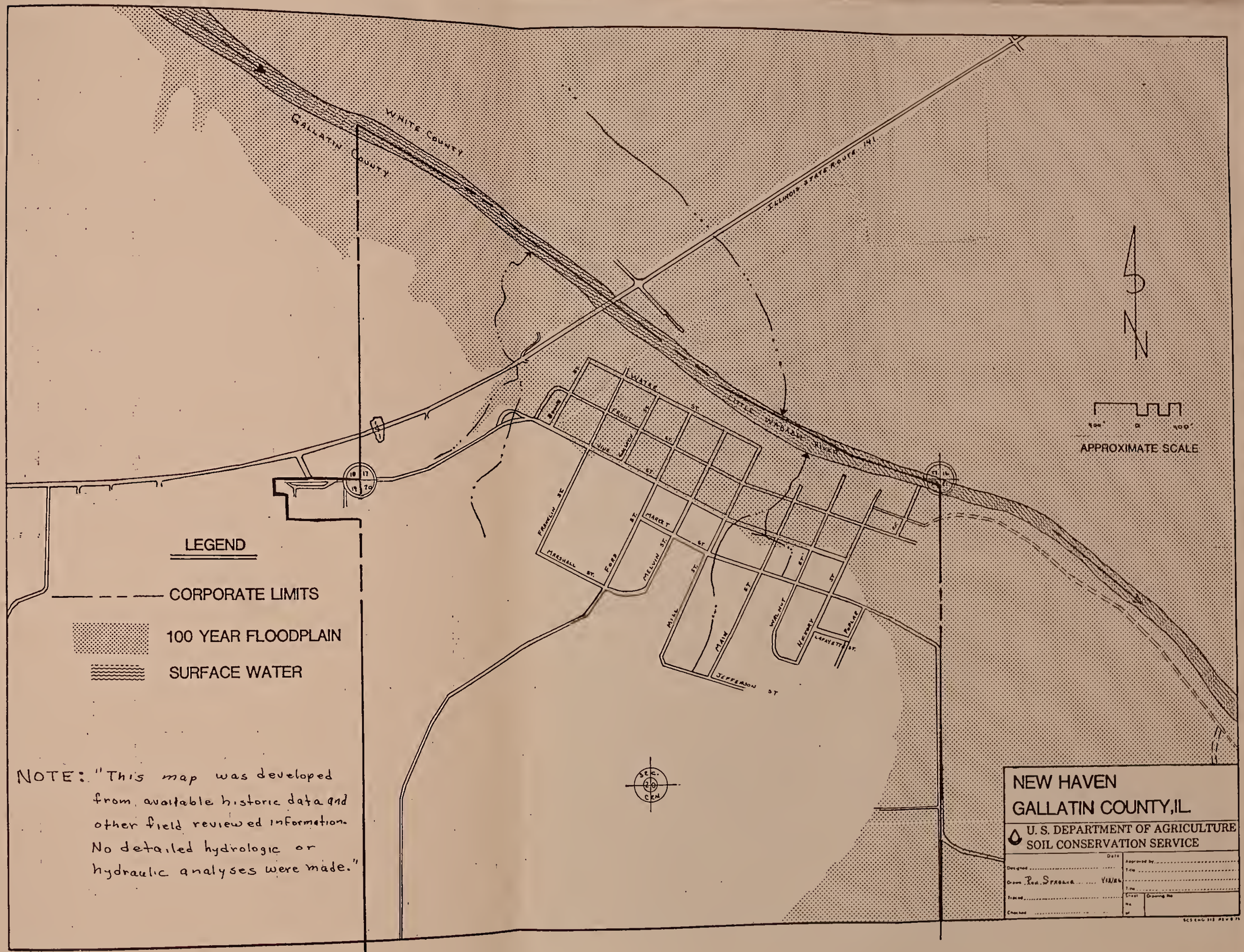
Better surface or subsurface drainage is needed near the streets that are being damaged by wet or water related problems. Improving the drains should also address the erosion occurring especially on the slopes so that sediment does not clog up any new drainage system.

A low priority should be assigned for a future detailed floodplain management study in New Haven.

No additional calculations, discharges, or profiles were made as a part of this study. The inventory of flooding and water problems is based on a field review and interviews with local citizens. The Floodplain Delineation Map, along with interviews of local citizens was used to determine the 100 year floodplain. Aerial photographs were provided by the Division of Water Resources. Damages were based on property value estimates during the field review, and the application of damage factors. These factors came from previous detailed floodplain management studies.



VICINITY MAP
NEW HAVEN
GALLATIN CO., IL.
SCALE- 1" = 12 MILES



NOTE: "This map was developed from available historic data and other field reviewed information. No detailed hydrologic or hydraulic analyses were made."

NEW HAVEN
GALLATIN COUNTY, IL.

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

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